

Remarks

This is in response to the first substantive Office Action mailed October 25, 2007, which rejected claims 19, 21-23, 26, 27, 30-33 and 36 and withdrew non-elected claims 24-25, 28-29, 34-35 and 37-39.

The Applicant has hereinabove presented amendments to the specification and claims. The title of the specification has been amended to better conform to the claimed subject matter. Dependent claim 21 has been amended to now generally feature *“wherein the bias force is characterized as a first bias force which is imparted upon the first disc member using a first finger of the biasing tool.”* Support for this latter amendment includes in the specification at page 10, lines 6-12 as well as in claims 22-23.

New claims 40 and 41 respectively depend from independent claims 19 and 30, and also read upon the elected invention. Claims 40 and 41 generally feature a subsequent step of *“applying a clamp to the disc member to retain said alignment of the track center of rotation with the hub central axis.”* Support includes the exemplary disc clamp 138 in FIG. 1 and in the specification at page 5, lines 12-20.

These amendments are proper, do not introduce new matter, and serve to place the application in proper condition for reconsideration and allowance.

Election/Restriction

The Applicant acknowledges the withdrawal of non-elected dependent claims 24-25, 28-29, 34-35 and 37-39 by the Examiner. The Applicant will be entitled to examination of these claims upon an indication of allowance of the respective independent linking claims 19 and 30.

Objection to Title

The title was objected to as being insufficiently descriptive. While this is respectfully traversed, the title has been amended above per the Examiner's suggestion.

Objection to Claims

Claims 22-23 were objected to based on a lack of antecedent basis for the language "the first finger." The Applicant apologizes for this error, and believes that the clarifying amendment presented above to claim 21, from which claims 22-23 depend, obviate this objection.

Rejection of Claims Under 35 U.S.C. §102(b)

Claims 19, 21, 26 and 27 were rejected as being anticipated by U.S. Patent No. 6,158,112 to Kim et al. ("Kim '112"). This is respectfully traversed.

As the Examiner will appreciate, all limitations in a claim must be shown to be present and arranged exactly as set forth by the claim in the cited reference before a *prima facie* case of anticipation can be established. *In re Bond*, 15 USPQ2d 1566 (Fed. Cir. 1990); MPEP 2131.

Limitations not expressly present in the cited reference are inherently present only if the skilled artisan would understand the missing subject matter to be necessarily present in the cited reference; mere possibilities or probabilities are insufficient to establish anticipation by inherency. *In re Robertson*, 49 USPQ2d 1949 (Fed. Cir. 1999); *In re Rijckaert*, 28 USPQ2d 1955 (Fed. Cir. 1993); MPEP 2112.

The Examiner stated that the “*disc members of Kim inherently have at least one annular track in order for the disc member to operate in a disc drive environment,*” and relied upon U.S. Patent No. 4,068,267 to Inouye (Inouye ‘261) in support of this assertion. See first Office Action, page 3, lines 15-18.

This assertion is respectfully traversed as being insufficient to establish anticipation by inherency. Independent claim 19 does not merely recite a disc member with at least one annular track. Rather, claim 19 recites the track to be present on the disc and offset from the central axis of the hub during the recited “providing” step, and recites this offset as being removed during the recited “imparting” step.

There is nothing in either Kim ‘112 or Inouye ‘261 that requires the track to be present and initially offset in the manner claimed. On the contrary, the skilled artisan would immediately recognize that any tracks on the discs in Kim ‘112 would likely be written after the push pins 16 have already aligned the respective discs 1 on the hub 2b, as is conventionally done using a servo track writer that operates upon the finished assembly.

Accordingly, Kim ‘112 fails to either explicitly or inherently disclose a step of “*providing a hub with a central axis, the hub supporting a disc member having an annular track with a center of rotation offset from the central axis,*” as featured by claim 19.

Kim ‘112 further fails to explicitly or inherently disclose a step of “*imparting a bias force on the disc member to align the center of rotation of the track with the central axis by contactingly engaging the disc member with a flexible cantilevered finger of a biasing tool,*” as featured by claim 19. Reconsideration and withdrawal of the rejection

of claim 19, and for the claims depending therefrom, are respectfully requested on this basis.

Rejection of Claims Under 35 U.S.C. §103(a)

Claims 30, 31 and 36 were rejected as being obvious over Kim '112 in view of U.S. Patent No. 4,748,524 to Fukaya et al. ("Fukaya '524"). This rejection is respectfully traversed.

The Applicant agrees with the Examiner that Kim '112 at least fails to teach or suggest a step of "*providing a disc member with an annular track having a track center offset from a center of the disc member,*" as featured by independent claim 30. However, the Applicant respectfully traverses the view that the skilled artisan would find it desirable to utilize the disc member taught by Fukaya '524 with the system of Kim '112 to arrive at the claimed combination.

Initially, the Applicant gratefully acknowledges the Examiner's reference to FIG. 1 of Fukaya '524 in identifying a disc member with tracks A and B that are indeed centered at a point O', which is offset from a center of the disc member O. See Fukaya '524, FIG. 1 and Office Action, page 4, lines 17-19.

The reference by the Examiner to the entire written text of Fukaya '524 in support of a description of how the disc member operates, however, was less helpful. Office Action, page 3, lines 19-20 ("*To utilize such a disc member of Fukaya allows for positional adjustment and inspection of a magnetic head in a disc drive. (col. 1, lines 8+).*")."

Nevertheless, the Applicant has perused the reference and determined that Fukaya '524 generally teaches the rotation of the offset tracks A and B adjacent a floppy disk read head H produces a time-varying signal (so-called "cat's eye"), such as illustrated in FIG. 2. Col. 3, lines 5-7. The respective magnitudes of the peaks in the signal can be measured and used to correct error in the positioning of the head.. Col. 3, lines 23-29.

Fukaya '524 further teaches to provide the tracks A and B with intermittent non-recorded regions, as represented in FIG. 3, to reduce the effects of magnetic coupling between read and erase elements of the head, thereby improving accuracy in the head position correction operation. Col. 3, lines 30-35; col. 4, lines 13-26.

Obviousness determinations by the PTO are carried out in accordance with . *Graham v. John Deere*, 363 US 1 (1966). MPEP 2141. When considering the Kim '112 and Fukaya '524 references as a whole (per *Graham*), the skilled artisan would note that the eccentricity of the tracks A and B in Fukaya '524 is necessary to the operative principles of the disclosed system. That is, if the eccentricity of the tracks A and B were to be eliminated by shifting the rotational center of the disc in Fukaya '524 to coincide with the center of the tracks A and B, no cat's eye pattern would be obtained because the tracks would remain radially stationary with respect to the associated head.

Yet the Examiner has proposed that the skilled artisan would find it desirable to do exactly that. More specifically, the Examiner has posited that the skilled artisan would find it desirable to modify Kim '112 to initially apply offset calibration tracks such as A and B to the disc 1 in Kim '112 to carry out the so-called head alignment correction operation taught by Fukaya '524.

The Examiner then found the skilled artisan would find it desirable to proceed with “*contactingly engaging a distal end of a cantilevered finger of a biasing tool against the disc member to impart a bias force which aligns the track center with a central axis of a rotatable hub.*” This is without merit.

The Examiner’s stated rationale for making the above combination would be “*to advantageously allow for positional adjustments and inspection of magnetic head and the disc drive.*” Office Action, page 4, lines 23-24. But this rationale would only apply to initially provisioning the offset tracks in the first place. This rationale does not address why the skilled artisan would find it desirable to subsequently shift the position of the disc as set forth by the “contactingly engaging” step of claim 30.

First, it is noted that the head positional alignments taught by Fukaya ‘524 correct head position error with respect to the existing disc location. The skilled artisan would immediately recognize that subsequently shifting the location of the disc as taught by Kim ‘112 would reintroduce error in the position of the head, since the relative location of the head with respect to the disc center would be necessarily changed.

Second, Kim ‘112 teaches that the balancing system operates to correct disc imbalance, and the presence of disc imbalance adversely affects the operation of the heads. Col. 3, lines 52-53 and 57-60. It is therefore highly implausible that the skilled artisan would find it desirable to first carry out a head positioning operation as taught by Fukaya ‘524, and then carry out a balancing operation on the discs to remove imbalance as taught by Kim ‘112.

Third, the Applicant points out again that neither Kim ‘112 nor Fukaya ‘524 teach or suggest aligning the center of rotation of an eccentric track with the central axis of a

hub. Merely carrying out a balancing operation as taught by Kim '112 would not necessarily result in such alignment. Indeed, the eccentricity of the tracks could be increased during such operation, if the center of the track was moved farther away from the hub central axis. Moreover, specifically aligning the center of the eccentric tracks with the hub central axis would wholly remove the track eccentricity, thereby destroying the operative principle of the tracks provided by Fukaya '524. See *In re Ratti*, 123 USPQ 349 (CCPA 1959); MPEP 2143. 01. There is simply no reason to do this, other than improper hindsight reconstruction of the claims.

An obviousness determination cannot be based on merely conclusory statements; rather, there must be “*some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.*” *KSR International Co. v. Teleflex Inc.*, 82 USPQ2d 1385, 1396 (2007), quoting *In re Kahn*, 78 USPQ2d 1329 (Fed. Cir. 2006).

In the present case, there is no articulated reasoning based on some rational underpinning as to why the skilled artisan would in fact arrive at the claimed combination of claim 30 from the Kim '112 and Fukaya '524 references. Reconsideration and withdrawal of the rejection of claim 30, and for the claims depending therefrom, are accordingly requested.

Newly Added Claims

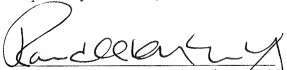
Pursuant to 37 CFR 1.111, new claims 40 and 41 are believed to be patentable as depending from patentable base claims. Upon allowance of the case, the Applicant requests that claim 40 be renumbered so as to be grouped with the other claims that depend from base claim 19.

Conclusion

This is intended to be a complete response to the first substantive Office Action mailed October 25, 2007. The Applicant respectfully requests examination and allowance of the elected claims, as well as the non-elected claims upon allowance of the independent linking claims.

Should any questions arise concerning this response, the Examiner is invited to contact the below signed attorney.

Respectfully submitted,

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